



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,885	10/10/2001	William R. Bush	6502.0357-00	2176
22852	7590	02/09/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			DADA, BEEMNET W	
		ART UNIT	PAPER NUMBER	
		2135		

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/976,885	BUSH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Beemnet W. Dada	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 29 November 2005.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-29 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

1. This office action is in reply to an amendment filed on November 29, 2005. Claims 1-29 are pending.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 10-21 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gong WO 99/30217 in view of Gong et al. "Going Beyond the Sandbox: An Overview of the New Security Architecture in the Java Development Kit 1.2" (hereinafter Reference V).

5. As per claim 1 and 25, Gong teaches a method for providing security, comprising: separating a plurality of classes into at least a first trusted class and an untrusted class [page 3, lines 7-17 and page 8, line 37- page 9, line 24];

associating privilege information (i.e., permissions) with the first trusted class [page 3, lines 7-24]; and

Gong further teaches an access control method wherein an instance of a class within one domain accessing another instance of a different class within a different domain (i.e., object a invokes b which invokes c, see page 13, lines 17-27, figure 6 and access controller figs 2 and 5).

Gong does not explicitly teach controlling access to the first trusted class by the untrusted class or a second trusted class based upon the privilege information associating with the first trusted class. However, within the same field of endeavor Reference V teaches an access control method including controlling access to a first trusted class by an untrusted class or a second trusted class based upon privilege information associating with the first trusted class [see page 5 and 6, section 2.4 Domain-Based Access Control]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to employ the teachings of Reference V within the system of Gong in order to further control access between different classes thereby enhancing security of the system.

6. As per claim 18, Gong teaches a secure virtual machine instruction processor comprising:

a first memory space for storing an untrusted class and a second memory space for storing a first trusted class [page 13, lines 1-9, page 3, lines 7-17 and page 8, line 37- page 9, line 24];

a privilege manager for managing privilege information associated with the first trusted class [page 3, lines 7-24]; and

Gong further teaches an access control method wherein an instance of a class within one domain accessing another instance of a different class within a different domain (i.e., object a invokes b which invokes c, see page 13, lines 17-27, figure 6 and access controller figs 2 and 5).

Gong does not explicitly teach controlling access to the first trusted class by the untrusted class or a second trusted class based upon the privilege information associating with the first trusted class. However, within the same field of endeavor Reference V teaches an access control method including controlling access to a first trusted class by the untrusted class or a second trusted class based upon privilege information associating with the first trusted class [see page 5 and 6, section 2.4 Domain-Based Access Control]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to employ the teachings of Reference V within the system of Gong in order to further control access between different classes thereby enhancing security of the system.

7. As per claims 2, 3, 20, 21, 26 and 27, Reference V further teaches granting/refusing privileges based upon permissive attribute of privilege information and the step of controlling access depends upon the privilege [see page 5 and 6, section 2.4 Domain-Based Access Control].

8. As per claim 4, Reference V further teaches permitting access to the trusted class in a predetermined manner if the privilege permits the access [see page 5 and 6, section 2.4 Domain-Based Access Control].

9. As per claim 5, Reference V further teaches denying the access in a predetermined manner if the access to the first trusted class in the predefined manner is contrary to the privilege [see page 5 and 6, section 2.4 Domain-Based Access Control].

10. As per claim 6, Reference V further teaches wherein the privilege allows at least one of the group of creating a subclass of the first trusted class, creating a new instance of the first trusted class, allowing the untrusted class or second trusted class to invoke a method of the first trusted class, and allowing the untrusted class or second trusted class access to trusted data of the first trusted class [see page 5 and 6, section 2.4 Domain-Based Access Control].

11. As per claim 10, Gong further teaches allocating a separate memory space for the first class and untrusted class [page 13, lines 1-9, page 3, lines 7-17 and page 8, line 37- page 9, line 24].

12. As per claims 11-14 and 19, Gong further teaches the privilege information further comprises a plurality of permissive attributes [see page 9, line28 – page 10 line 22].

13. AS per claims 15-17 and 28-29 Reference V further teaches controlling access to the first class including detecting when a request for a trusted class peration is made by the untrusted class or second trusted class determining that the trusted class operation is authorized based on the privilege information associated with the first trusted class and allowing access to the first trusted class according to the trusted class operation [see page 5 and 6, section 2.4 Domain-Based Access Control].

14. Claims 7-9 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gong WO 99/30217 in view of Reference V as applied above and further in view of Papa et al. (Ref U).

15. As per claims 7-9 and 22-24 Gong-Reference V teaches the method as applied to claims 1 and 18 above. Gong-Reference V is silent on separating classes further comprising associating a package with a trusted class. However, Papa et al teaches associating a package with a trusted class, wherein associating the package further a comprises encapsulating the first trusted class within the package [see page 67-68, sections 2.1, java package protection model, 2.2 authorization model]. It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to employ the teachings of Papa et al within the system of Gong-Reference V thereby allowing associating a package with a trusted class and providing protection within a package level.

### ***Conclusion***

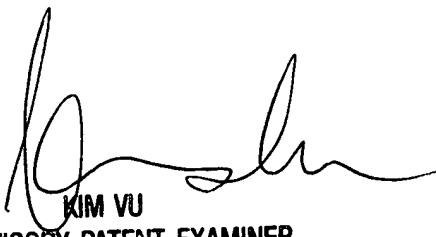
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beemnet W. Dada whose telephone number is (571) 272-3847. The examiner can normally be reached on Monday - Friday (9:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Beemnet Dada

February 3, 2006



KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100